SIEMENS

Data sheet

3RM1002-1AA14



Direct starter, 3RM1, 500 V, 0.09 - 0.75 kW, 0.4 - 2 A, 110-230 V AC, screw terminals

| product brand name | SIRIUS |
|---|--|
| product category | Motor starter |
| product designation | Direct-on-line starter |
| design of the product | with electronic overload protection |
| product type designation | 3RM1 |
| General technical data | |
| equipment variant according to IEC 60947-4-2 | 3 |
| product function | Direct-on-line starter |
| intrinsic device protection | Yes |
| for power supply reverse polarity protection | No |
| suitability for operation device connector 3ZY12 | No |
| power loss [W] for rated value of the current | |
| at AC in hot operating state per pole | 0.1 W |
| without load current share typical | 5.06 W |
| insulation voltage rated value | 500 V |
| overvoltage category | III |
| surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for protective separation | |
| between main and auxiliary circuit | 500 V |
| between control and auxiliary circuit | 250 V |
| shock resistance | 6g / 11 ms |
| vibration resistance | 1 6 Hz, 15 mm; 20 m/s², 500 Hz |
| operating frequency maximum | 1 1/s |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 03/01/2017 |
| SVHC substance name | Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 |
| Weight | 0.322 kg |
| product function | |
| direct start | Yes |
| reverse starting | No |
| product function short circuit protection | No |
| Electromagnetic compatibility | |
| EMC emitted interference according to IEC 60947-1 | class A |
| EMC immunity according to IEC 60947-1 | Class A |
| conducted interference | |
| due to burst according to IEC 61000-4-4 | 3 kV / 5 kHz |
| due to conductor-earth surge according to IEC 61000-4-5 | 2 KV |
| • due to conductor-conductor surge according to IEC 61000-4-5 | 1 KV |
| due to high-frequency radiation according to IEC 61000- | 10 V |

| 4-6 | |
|---|---|
| field-based interference according to IEC 61000-4-3 | 10 V/m |
| electrostatic discharge according to IEC 61000-4-2 | 4 kV contact discharge / 8 kV air discharge |
| conducted HF interference emissions according to CISPR11 | Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC |
| field-bound HF interference emission according to CISPR11 | Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC |
| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe |
| Main circuit | |
| number of poles for main current circuit | 3 |
| design of the switching contact | Hybrid |
| design of the switching contact as NO contact for signaling function | OUT, electronic, 24 V DC, 15 mA |
| adjustable current response value current of the current- dependent overload release | 0.4 2 A |
| minimum load [%] | 20 %; from set rated current |
| type of the motor protection | solid-state |
| operating voltage rated value | 48 500 V |
| relative symmetrical tolerance of the operating voltage | 10 % |
| operating frequency 1 rated value | 50 Hz |
| operating frequency 2 rated value | 60 Hz |
| relative symmetrical tolerance of the operating frequency | 10 % |
| operational current | |
| • at AC at 400 V rated value | 2 A |
| at AC-3 at 400 V rated value | 2 A |
| • at AC-53a at 400 V at ambient temperature 40 °C rated value | 2 A |
| ampacity when starting maximum | 16 A |
| operating power for 3-phase motors at 400 V at 50 Hz | 0.09 0.75 kW |
| Inputs/ Outputs | |
| input voltage at digital input | |
| • at DC rated value | 110 V |
| • with signal <0> at DC | 040V |
| • for signal <1> at DC | 79 121 |
| input voltage at digital input | 110.1/ |
| • at AC rated value | 110 V |
| • with signal <0> at AC | 0 40 V 93 253 V |
| • for signal <1> at AC | 30 200 V |
| input current at digital input • for signal <1> at DC | 1.5 mA |
| tor signal <1> at DC with signal <0> at DC | 0.25 mA |
| input current at digital input with signal <0> at AC | 0.20 11/2 |
| • at 110 V | 0.2 mA |
| • at 230 V | 0.4 mA |
| input current at digital input for signal <1> at AC | |
| • at 110 V | 1.1 mA |
| • at 230 V | 2.3 mA |
| number of CO contacts for auxiliary contacts | 1 |
| operational current of auxiliary contacts at AC-15 at 230 V maximum | 3 A |
| operational current of auxiliary contacts at DC-13 at 24 V maximum | 1 A |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | AC/DC |
| control supply voltage at AC | |
| • at 50 Hz rated value | 110 230 V |
| • at 60 Hz rated value | 110 230 V |
| relative negative tolerance of the control supply voltage at AC at 60 Hz | 15 % |
| | |

| mounting position vertical, horizontal, standing (observe derating) fastening method screw and snap-on mounting onto 35 mm DIN rail height 100 mm | | |
|--|---|---|
| • arised bit210200 Vcontrol supply voltage frequency50 1/2• 1 rated value60 1/2• rated value10.%or failer negative tolerance of the control supply voltage rated value10.%0.0.%• initial value10.%• initial value0.%• initial value1.1• initial value0.%• initial value0.%• initial value1.1• initial value0.%• initial value1.1• initial value <td< th=""><th></th><th></th></td<> | | |
| control supply voltage frequency • 1 stack valueSet A 60 Hz• 1 redict value60 Hz• 1 redict value15 %• redict value10 %• Control supply voltage redict value10 %• redict value05 %• India value00 %• India v | | |
| initial value00 Hzi2 rated value00 Hzreative negative tolerance of the control supply voltage at a0.5%control supply voltage 1 at DC rated value0.5%control supply voltage rated value1.1control supply voltage rated value0.5%control supply voltage rated value0.5%control supply voltage rated value0.5%control current at AC0.5%control current stat AC0.5%control current st | • at 60 Hz | 110 230 V |
| • 2rds value0 // 2rictive polite tolerance of the control supply voltage10control supply voltage 1 at DC reads10ortend supply voltage 1 at DC reads0rinkila value0.5- initial value | control supply voltage frequency | |
| relative negative tolerance of the control supply voltage at DC relative positive tolerance of the control supply voltage at DC relative positive tolerance of the control supply voltage rate initial value initial value init | • 1 rated value | 50 Hz |
| DC | • 2 rated value | 60 Hz |
| pc | | 15 % |
| operating range factor control supply voltage rated value at 0.85 1.1 1.1 | | 10 % |
| DC Control supply voltage rated value initial value 0.85 initial value 0.9 mA initio (on poperation 0 mA | control supply voltage 1 at DC rated value | 110 V |
| • hil-scale value1.1operating range factor control supply voltage rated value05initial value0.5• hill-scale value1.1operating range factor control supply voltage rated value5• hill-scale value0.1• hill-scale value0.1• hill-scale value0.1• hill-scale value0.1• hill-scale value0.3• hill-scale value0.3< | | |
| spectral range factor control supply voltage rated value at AC at 50 hr. 0.85 initial value 0.85 ial 101 V in standby mode of operation 9 mA ial 101 V in standby mode of operation 9 mA ial 101 V duming operation 30 mA ial 101 V duming operation 30 mA ial 102 V duming operation 30 mA ial AC at 104 V 1200 mA ial AC at 104 V at switching on of motor 2800 mA ial AC at 104 V at switching on of motor 2800 mA ial AC at 104 V at switching on of motor 100 mA ial AC at 204 V at switching on of motor 100 mA ial AC at 104 V at switching on of motor 100 mA ial AC at 204 V at switching on of motor 100 mA ial AC at 204 V at switching on of | • initial value | 0.85 |
| AC at 50 iz 0.85 initial value 0.9 mA initial value 0.80 mA initial value 0.80 mA initial value 0.80 mA initial value 0.80 mA initial value 0.90 mA initial value 0.90 mA | • full-scale value | 1.1 |
| • full-scale value1.1operating range factor cortor) supply voltage rated value at tat iso lar.U• initial value0.5• initial value1.1control current at AC9 mA• at 100 Vin standby mode of operation9 mA• at 200 Vin ben switching on56 mA• at 200 Vin ben switching on36 mA• at 200 Vinding operation36 mA• at 200 Vinding operation30 mA• at 200 Vinding operation200 mA• at 200 Vinding operation200 mA• at 200 Vinding operation1200 mA• at AC at 100 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on of motor1200 mA• at AC at 200 Vinding on o | | |
| operating range factor control supply voltage rated value at initial value initial value 0.85 initial value 1.1 control current at AC 9 mA • at 110 V in standby mode of operation 9 mA • at 230 V in standby mode of operation 9 mA • at 230 V when switching on 35 mA • at 230 V when switching on 36 mA • at 230 V ulung operation 20 mA • at 230 V ulung operation 30 mA • at AC at 230 V 2000 mA • at AC at 230 V 2000 mA • at AC at 230 V 2000 mA • at AC at 230 V at switching on of motor 100 mA • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at swi | initial value | 0.85 |
| AC at 60 hz AC at 60 hz • initial value 0.55 • full-scale value 1.1 control current at AC 9 mA • at 130 V in standby mode of operation 9 mA • at 110 V when switching on 55 mA • at 230 V in standby mode of operation 36 mA • at 230 V during operation 36 mA • at 230 V during operation 36 mA • at 230 V during operation 30 mA • at AC at 110 V 30 mA • at AC at 110 V 1200 mA • at AC at 110 V at switching on of motor 2 900 mA • at AC at 110 V at switching on of motor 1200 mA • at AC at 110 V at switching on of motor 1 200 mA • at AC at 110 V at switching on of motor 1 200 mA • at AC at 110 V 1 ms • at AC at 110 V at switching on of motor 1 ms • at AC at 10 V 1 ms • at AC at 10 V 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 10 V at switching on of motor 1 ms • at AC at 10 V at switching on of motor 1 ms | full-scale value | 1.1 |
| • full-scale value1.1control current at ACImma•• alt 100 V in standby mode of operation9 mA•• alt 320 V in standby mode of operation9 mA•• alt 320 V when switching on35 mA•• alt 320 V during operation36 mA•• alt 320 V during operation20 mA•• alt 320 V during operation30 mA•• alt 320 V during operation30 mA•• alt AC at 110 V30 mA•• alt AC at 110 V2000 mA•• alt AC at 110 V1200 mA•• alt AC at 110 V at switching on of motor1200 mA•• alt AC at 110 V at switching on of motor2000 mA•• alt AC at 110 V at switching on of motor1200 mA•• alt AC at 110 V at switching on of motor1200 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor100 mA•• alt AC at 110 V at switching on of motor00 mA•• alt AC at 110 V at switching on of motor00 mA•• alt AC at 110 V at switching | | |
| control current at AC •••••••••••••••••••••••••••••••••••• | initial value | 0.85 |
| • at 110 V in standby mode of operation9 mA• at 1230 V in standby mode of operation9 mA• at 1230 V when switching on35 mA• at 230 V when switching on30 mA• at 230 V duing operation22 mA• at 230 V duing operation30 mA• at 230 V duing operation6 mA• of standby mode of operation30 mA• of at 230 V duing operation200 mA• at 230 V duing operation200 mA• at AC at 110 V1 200 mA• at AC at 230 V a switching on of motor2 900 mA• at AC at 230 V a switching on of motor2 900 mA• at AC at 110 V1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 110 V at switching on of motor5.06 W• at AC at 230 V at switching at at Cat2 A• at 40 °C rated value2 A | full-scale value | 1.1 |
| • at 230 V in standy mode of operation9 mA• at 110 V when switching on55 mA• at 230 V when switching on33 mA• at 110 V during operation36 mA• at 1230 V during operation22 mA• on standwy mode of operation6 mA• during operation30 mA• in standwy mode of operation6 mA• during operation30 mA• in standwy mode of operation6 mA• during operation30 mA• at Ac at 100 V1 200 mA• at Ac at 230 V2 900 mA• at Ac at 230 V at switching on of motor2 900 mA• at Ac at 230 V at switching on of motor2 900 mA• at Ac at 230 V at switching on of motor2 900 mA• at Ac at 230 V at switching on of motor1 ms• at Ac at 230 V at switching on of motor1 ms• at Ac at 230 V at switching on of motor1 ms• at Ac at 230 V at switching on of motor1 ms• at Ac at 230 V at switching on of motor1 ms• at Ac at 230 V at switching on of motor1 ms• at Ac at 230 V at switching on of motor5.06 W• mit bypass circuit5.06 W• mit bypass circuit60 90 ms• operational current2 A• at 60 °C rated value2 A• at 60 °C rated value <th>control current at AC</th> <th></th> | control current at AC | |
| • at 110 V when switching on55 mA• at 230 V when switching on33 mA• at 130 V during operation22 mA• at 230 V during operation22 mA• in standby mode of operation60 mA• during operation30 mA• during operation30 mA• during operation30 mA• during operation1200 mA• at AC at 110 V1200 mA• at AC at 230 V2 900 mA• at AC at 230 V2 900 mA• at AC at 230 V at whiching on of motor1 200 mA• at AC at 230 V at whiching on of motor2 900 mA• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor1 ms• at AC at 230 V at whiching on of motor2 nW• at AC at 200 V at whiching on of motor0 ms• at AC at 200 V at | at 110 V in standby mode of operation | 16 mA |
| • at 230 V when switching on 33 mA • at 110 V during operation 36 mA • at 230 V during operation 28 mA • at 230 V during operation 6 mA • during operation 6 mA • during operation 6 mA • during operation 1200 mA • at AC at 110 V 1200 mA • at AC at 110 V at switching on of motor 1200 mA • at AC at 110 V at switching on of motor 2900 mA • at AC at 110 V at switching on of motor 1200 mA • at AC at 230 V at switching on of motor 2900 mA • at AC at 110 V at switching on of motor 100 mA • at AC at 230 V at switching on of motor 1 ms • at AC at 110 V at switching on of motor 1 ms • at AC at 230 V 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching and control circuit • ms • at AC at 230 V at switching and control circuit • ms • at AC at 230 V at switching and control circuit <th> at 230 V in standby mode of operation </th> <th>9 mA</th> | at 230 V in standby mode of operation | 9 mA |
| • at 110 V during operation38 mA• at 230 V during operation22 mAcontrol current at DC• in standby mode of operation6 mA• during operation30 mA• during operation1 200 mA• at A C at 110 V2 900 mA• at A C at 230 V2 900 mA• at A C at 230 V at switching on of motor1 200 mA• at A C at 110 V at switching on of motor2 900 mA• at A C at 230 V at switching on of motor2 900 mA• at A C at 110 V at switching on of motor1 ms• at A C at 110 V at switching on of motor1 ms• at A C at 110 V at switching on of motor1 ms• at A C at 230 V1 ms• at A C at 110 V at switching on of motor1 ms• at A C at 230 V at switching on of motor1 ms• at A C at 230 V at switching on of motor1 ms• at A C at 230 V at switching on of motor1 ms• at A C at 230 V at switching on of motor1 ms• at A C at 230 V at switching on of motor1 ms• at A C at 230 V at switching on of motor2.1 W• at A C at 230 V at switching on of motor0 ms• owith bypass circuit6.0 90 ms• owit bypass circuit6.0 90 ms• ower Electronics2 A• at 40 °C rated value2 A• at 50 °C rated value2 | at 110 V when switching on | 55 mA |
| • at 230 V during operation22 mAcontrol current at DCF• in standby mode of operation6 mA• during operation30 mAinrush current peak1200 mA• at AC at 110 V1200 mA• at AC at 110 V at switching on of motor1200 mA• at AC at 230 V at switching on of motor2900 mA• at AC at 230 V at switching on of motor2900 mA• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor0 ms• at AC at 230 V at switching on of motor2.1 W• mytholypass circuit5.06 W• mytholypass circuit0 90 ms• OPF-delay time0 90 msOPF-delay time2.A• at 40 °C rated value2.A• at 40 °C rated value2.A• at 60 °C rated value2.A• at 60 °C rated value2.A• at 60 °C rated value2.A• at | • at 230 V when switching on | 33 mA |
| control current at DC G in is standby mode of operation 6 mA in trush current peak 50 mA intrush current peak 200 mA it AC at 110 V 1 200 mA it AC at 230 V 2 900 mA it AC at 230 V at switching on of motor 2 900 mA it AC at 230 V at switching on of motor 2 900 mA it AC at 230 V at switching on of motor 2 900 mA it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it as witching state OFF - - with bypass circuit 2.1 W - with bypass circuit 0.6 90 ms OFF-delay time 60 90 ms OFF-delay time 2.4 it 50 °C rated value 2.A it 50 °C rated value 2.A | • at 110 V during operation | 36 mA |
| control current at DC G in is standby mode of operation 6 mA in trush current peak 50 mA intrush current peak 200 mA it AC at 110 V 1 200 mA it AC at 230 V 2 900 mA it AC at 230 V at switching on of motor 2 900 mA it AC at 230 V at switching on of motor 2 900 mA it AC at 230 V at switching on of motor 2 900 mA it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it AC at 230 V at switching on of motor 1 ms it as witching state OFF - - with bypass circuit 2.1 W - with bypass circuit 0.6 90 ms OFF-delay time 60 90 ms OFF-delay time 2.4 it 50 °C rated value 2.A it 50 °C rated value 2.A | | 22 mA |
| eduring operation30 mAinrush current peak1int AC at 110 V1i at AC at 110 V2i at AC at 110 V at switching on of motor1i at AC at 230 V at switching on of motor2i at AC at 230 V at switching on of motor2i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1witching state OFF2.1 W- with bypass circuit2.0 W- with bypass circuit0.06 WOFF-dely time00 90 msOFF-dely time60 90 msOFF-dely time2.Ai at 40 °C rated value2.Ai at 60 °C rated value2.Ai at 6 | | |
| eduring operation30 mAinrush current peak1int AC at 110 V1i at AC at 110 V2i at AC at 110 V at switching on of motor1i at AC at 230 V at switching on of motor2i at AC at 230 V at switching on of motor2i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1i at AC at 230 V at switching on of motor1witching state OFF2.1 W- with bypass circuit2.0 W- with bypass circuit0.06 WOFF-dely time00 90 msOFF-dely time60 90 msOFF-dely time2.Ai at 40 °C rated value2.Ai at 60 °C rated value2.Ai at 6 | in standby mode of operation | 6 mA |
| inrush current peak 1 200 mA • at AC at 110 V 2 900 mA • at AC at 230 V 2 900 mA • at AC at 230 V at switching on of motor 2 900 mA • at AC at 123 V at switching on of motor 2 900 mA duration of inrush current peak 2 900 mA duration of inrush current peak 1 ms • at AC at 110 V 1 ms • at AC at 110 V at switching on of motor 1 ms • at AC at 110 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • at AC at 230 V at switching on of motor 1 ms • in switching state OFF - with bypass circuit 5.06 W • in switching state ON - with bypass circuit 5.06 W • off-delay time 60 90 ms OFF-delay time 60 90 ms • off-delay time 60 90 ms • off C rated value 2 A • at 60 °C rated value 2 A • at 60 °C rated value 2 A • at | | |
| • at AC at 110 V1 200 mA• at AC at 230 V2 900 mA• at AC at 230 V at switching on of motor1 200 mA• at AC at 230 V at switching on of motor2 900 mAduration of inrush current peak-• at AC at 230 V at switching on of motor1 ms• at AC at 230 V1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor2.1 W• at AC at 230 V at switching state OFF5.06 W• with bypass circuit5.06 W• with bypass circuit60 90 ms• or with bypass circuit2.4 A• at 40 °C rated value2.4 A• at 40 °C rated value2.4 A• at 40 °C rated value2.4 A• at 60 °C rated value2.4 A• at | | |
| • at AC at 230 V2 900 mA• at AC at 110 V at switching on of motor1 200 mA• at AC at 230 V at switching on of motor2 900 mAduration of inrush current peak• at AC at 130 V1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 230 V1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor2.1 W• in switching state OFF2.1 W• with bypass circuit2.1 W• ne with bypass circuit5.06 WCesponse times60 90 msOFF-delay time60 90 ms• of x140 °C rated value2 A• at 40 °C rated value2 A• at 50 °C rated value2 A• at 60 °C rated value3 A | - | 1 200 mA |
| • at AC at 110 V at switching on of motor1 200 mA• at AC at 230 V at switching on of motor2 900 mAduration of inrush current peakIms• at AC at 110 V1 ms• at AC at 230 V1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor2 1 W• at AC at 230 V at switching on of motor2 1 W• in switching state OFF2 1 W• with bypass circuit5 06 W• multipass circuit5 06 W• or with bypass circuit6 0 90 ms• or with bypass circuit2 A• or with of a rate of Value2 A• at 40 °C rated value2 A• at 40 °C rated value2 A• at 40 °C rated value2 A• at 50 °C rated value2 A• at 60 °C rated value3 C• at 60 °C rated value3 C• at 60 °C rated value4 C• at 60 °C rated value4 C• at 60 °C rated value3 C• at 60 °C rated | • at AC at 230 V | |
| • at AC at 230 V at switching on of motor2 900 mAduration of inrush current peak-• at AC at 110 V1 ms• at AC at 230 V1 ms• at AC at 230 V1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor2.1 W• mith bypass circuit2.1 W• ni switching state OFF5.06 W- with bypass circuit60 90 ms• off-delay time60 90 ms• OFF-delay time60 90 ms• off-delay time2.4• at 40 °C rated value2.4• at 40 °C rated value2.4• at 50 °C rated value2.4• at 60 °C rated va | | |
| duration of inrush current peak• at AC at 110 V1 ms• at AC at 230 V1 ms• at AC at 230 V1 ms• at AC at 230 V at witching on f motor1 ms• at AC at 230 V at witching on f motor1 ms• at AC at 230 V at witching on f motor1 ms• at AC at 230 V at witching on f motor2 ms• mswitching state OFF with bypass circuit2.1 W• ne witching state ON with bypass circuit5.06 W• mswitching state ON60 90 ms• off-delay time60 90 msON-delay time60 90 ms• Off-delay time2 A• at 40 °C rated value2 A• at 40 °C rated value2 A• at 60 °C rated value2 A | | |
| • at AC at 110 V1 ms• at AC at 230 V1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• newtor loss [W] in auxiliary and control circuit1 ms• in switching state OFF2.1 W• newtor loss circuit5.06 W• newtor loss circuit5.06 W• newtor loss circuit60 90 ms• of F-delay time60 90 ms• of Crated value2 A• at 40 °C rated value2 A• at 50 °C rated value2 A• at 60 °C rated value3 C | | 2 300 mA |
| • at AC at 230 V1 ms• at AC at 110 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 mspower loss [W] in auxiliary and control circuit1 ms• in switching state OFF2.1 W- with bypass circuit5.06 W• mit bypass circuit60 90 msON-delay time60 90 msOFF-delay time60 90 msOver Electronics2 A• at 40 °C rated value2 A• at 50 °C rated value2 A• at 60 °C rated | - | 1 ms |
| • at AC at 110 V at switching on of motor1 ms• at AC at 230 V at switching on of motor1 mspower loss [W] in auxiliary and control circuit1 ms• in switching state OFF2.1 W- with bypass circuit5.06 W- with bypass circuit60 90 msON-delay time60 90 msOFF-delay time60 90 msOFF-delay time2.4operational current2.4• at 40 °C rated value2.4• at 55 °C rated value2.4• at 60 °C rated value3.5• at 60 °C rated value3.5 </th <th></th> <th></th> | | |
| • at AC at 230 V at switching on of motor 1 ms power loss [W] in auxiliary and control circuit - • in switching state OFF 2.1 W - with bypass circuit 5.06 W - with bypass circuit 5.06 W - with bypass circuit 60 90 ms ON-delay time 60 90 ms OF-delay time 60 90 ms OF-delay time 2.1 W operational current 2.1 S • at 40 °C rated value 2.4 C • at 55 °C rated value 2.4 C • at 50 °C rated value 2.4 C • at 60 °C rated value | | |
| power loss [W] in auxiliary and control circuit | | |
| • in switching state OFF 2.1 W - with bypass circuit 2.1 W • in switching state ON - - with bypass circuit 5.06 W Response times 60 90 ms ON-delay time 60 90 ms OFF-delay time 60 90 ms ower Electronics - operational current 2 A • at 40 °C rated value 2 A • at 50 °C rated value 2 A • at 60 °C rated value 100 mm | | 1 1115 |
| - with bypass circuit2.1 W• in switching state ON5.06 W- with bypass circuit5.06 WResponse times60 90 msON-delay time60 90 msOFF-delay time60 90 msOver Electronics60 90 msoperational current2 A• at 40 °C rated value2 A• at 50 °C rated value2 A• at 60 °C rated value2 A• box• conting position• conting position• conting vertical, horizontal, standing (observe derating)fastening methodio0 mmheight100 mm | | |
| • in switching state ON5.06 W— with bypass circuit5.06 WResponse times60 90 msON-delay time60 90 msOFF-delay time60 90 msOver Electronics0Over Electronics2 A• at 40 °C rated value2 A• at 50 °C rated value2 A• at 55 °C rated value2 A• at 60 °C rated value10 mm | - | 2.1.W |
| with bypass circuit 5.06 W Response times 60 90 ms ON-delay time 60 90 ms OFF-delay time 60 90 ms Ower Electronics 60 90 ms Over Electronics 2 A • at 40 °C rated value 2 A • at 50 °C rated value 2 A • at 55 °C rated value 2 A • at 60 °C rated value 3 Correcontal, standing (observe derating) < | | 2. Ι VV |
| Response times 60 90 ms OR-delay time 60 90 ms OFF-delay time 60 90 ms Power Electronics 2 operational current 2 A • at 40 °C rated value 2 A • at 50 °C rated value 2 A • at 55 °C rated value 2 A • at 60 °C rated value 2 A | - | 5 00 M |
| ON-delay time 60 90 ms OFF-delay time 60 90 ms Power Electronics 0 operational current 2 A • at 40 °C rated value 2 A • at 50 °C rated value 2 A • at 55 °C rated value 2 A • at 60 °C rated value 2 A | •• | 5.06 W |
| OFF-delay time 60 90 ms ower Electronics | | |
| Power Electronics operational current • at 40 °C rated value • at 50 °C rated value • at 55 °C rated value • at 60 °C rated value <th></th> <th></th> | | |
| operational current 2 A • at 40 °C rated value 2 A • at 50 °C rated value 2 A • at 55 °C rated value 2 A • at 60 °C rated value <th>-</th> <th>60 90 ms</th> | - | 60 90 ms |
| • at 40 °C rated value2 A• at 50 °C rated value2 A• at 55 °C rated value2 A• at 60 °C rated value3 A• | | |
| • at 50 °C rated value 2 A • at 55 °C rated value 2 A • at 60 °C rated value • vertical, horizontal, standing (observe derating) • fastening method • screw and snap-on mounting onto 35 mm DIN rail • height 100 mm | • | |
| • at 55 °C rated value 2 A • at 60 °C rated value 2 A • at 60 °C rated value 2 A Installation/ mounting/ dimensions • mounting position • vertical, horizontal, standing (observe derating) • fastening method • screw and snap-on mounting onto 35 mm DIN rail • height 100 mm | | |
| • at 60 °C rated value 2 A nstallation/ mounting/ dimensions vertical, horizontal, standing (observe derating) fastening method screw and snap-on mounting onto 35 mm DIN rail height 100 mm | | |
| Installation/ mounting/ dimensions vertical, horizontal, standing (observe derating) fastening method screw and snap-on mounting onto 35 mm DIN rail height 100 mm | | |
| mounting position vertical, horizontal, standing (observe derating) fastening method screw and snap-on mounting onto 35 mm DIN rail height 100 mm | | 2 A |
| fastening method screw and snap-on mounting onto 35 mm DIN rail height 100 mm | nstallation/ mounting/ dimensions | |
| height 100 mm | mounting position | vertical, horizontal, standing (observe derating) |
| | fastening method | screw and snap-on mounting onto 35 mm DIN rail |
| width 22.5 mm | height | 100 mm |
| 22.01111 | width | 22.5 mm |

| donth | 141.6 mm |
|--|--|
| depth | 141.6 mm |
| required spacing | |
| • with side-by-side mounting | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 50 mm |
| — downwards | 50 mm |
| — at the side | 0 mm |
| for grounded parts | |
| — forwards | 0 mm |
| — backwards | 0 mm |
| — upwards | 50 mm |
| — at the side | 3.5 mm |
| — downwards | 50 mm |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 4 000 m; For derating see manual |
| ambient temperature | |
| during operation | -25 +60 °C |
| during storage | -40 +70 °C |
| during transport | -40 +70 °C |
| environmental category during operation according to IEC 60721 | 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6 |
| relative humidity during operation | 10 95 % |
| air pressure according to SN 31205 | 900 1 060 hPa |
| Communication/ Protocol | |
| protocol is supported | |
| PROFINET IO protocol | No |
| PROFIsafe protocol | No |
| product function bus communication | No |
| protocol is supported AS-Interface protocol | No |
| Connections/ Terminals | |
| type of electrical connection | screw-type terminals for main circuit, screw-type terminals for control circuit |
| • for main current circuit | screw-type terminals |
| for auxiliary and control circuit | screw-type terminals |
| wire length for motor unshielded maximum | 100 m |
| type of connectable conductor cross-sections for main contacts | |
| • solid | 1x (0,5 4 mm²), 2x (0,5 2,5 mm²) |
| finely stranded with core end processing | 1x (0,5 4 mm²), 2x (0,5 1,5 mm²) |
| connectable conductor cross-section for main contacts | |
| solid or stranded | 0.5 4 mm² |
| finely stranded with core end processing | 0.5 4 mm² |
| connectable conductor cross-section for auxiliary contacts | |
| solid or stranded | 0.5 2.5 mm² |
| finely stranded with core end processing | 0.5 2.5 mm² |
| type of connectable conductor cross-sections | |
| for auxiliary contacts | |
| | |
| — solid | 1x (0,5 2,5 mm²), 2x (1,0 1,5 mm²) |
| - | 1x (0,5 2,5 mm²), 2x (1,0 1,5 mm²) 1x (0.5 2.5 mm²), 2x (0.5 1 mm²) |
| — solid | |
| — solid — finely stranded with core end processing | 1x (0.5 2.5 mm²), 2x (0.5 1 mm²) |
| — solid — finely stranded with core end processing • for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross | 1x (0.5 2.5 mm²), 2x (0.5 1 mm²) |
| — solid — finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section | 1x (0.5 2.5 mm²), 2x (0.5 1 mm²) 1x (20 14), 2x (18 16) |
| — solid — finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 |
| — solid — finely stranded with core end processing • for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 |
| — solid — finely stranded with core end processing • for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts UL/CSA ratings | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 |
| — solid finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts UL/CSA ratings yielded mechanical performance [hp] | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 |
| solid finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts UL/CSA ratings yielded mechanical performance [hp] for single-phase AC motor | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 20 14 |
| — solid finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts UL/CSA ratings yielded mechanical performance [hp] for single-phase AC motor at 230 V rated value | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 20 14 0.125 hp |
| — solid finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts UL/CSA ratings yielded mechanical performance [hp] for single-phase AC motor at 230 V rated value for 3-phase AC motor | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 20 14 |
| solid finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts for auxiliary contacts UL/CSA ratings yielded mechanical performance [hp] for single-phase AC motor at 230 V rated value for 3-phase AC motor | 1x (0.5 2.5 mm ²), 2x (0.5 1 mm ²) 1x (20 14), 2x (18 16) 20 12 20 14 0.125 hp 0.333 hp |

| operational current a | at AC at 480 V according | to UL 508 2 | A | | |
|------------------------|---|---------------------|-------------------------------|----------------------------------|-----|
| Approvals Certificates | | | | | |
| General Product App | proval | | | | |
| CCC | UK CA | CE EG-Konf. | Confirmation | | EHC |
| EMV | Test Certificates | other | Railway | Environment | |
| | Type Test Certific- ates/Test Report | <u>Confirmation</u> | Special Test Certific- ate | Environmental Con- firmations | |

Further information

Information on the packaging https://support.industry.siemens.com/cs/ww/en/view/109813875 Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RM1002-1AA14

Cax online generator

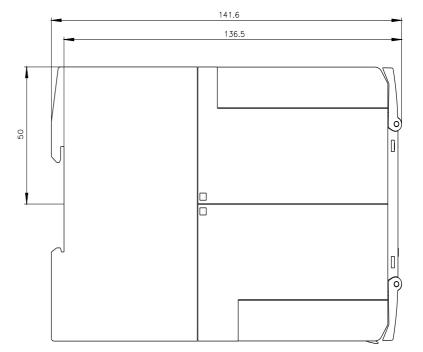
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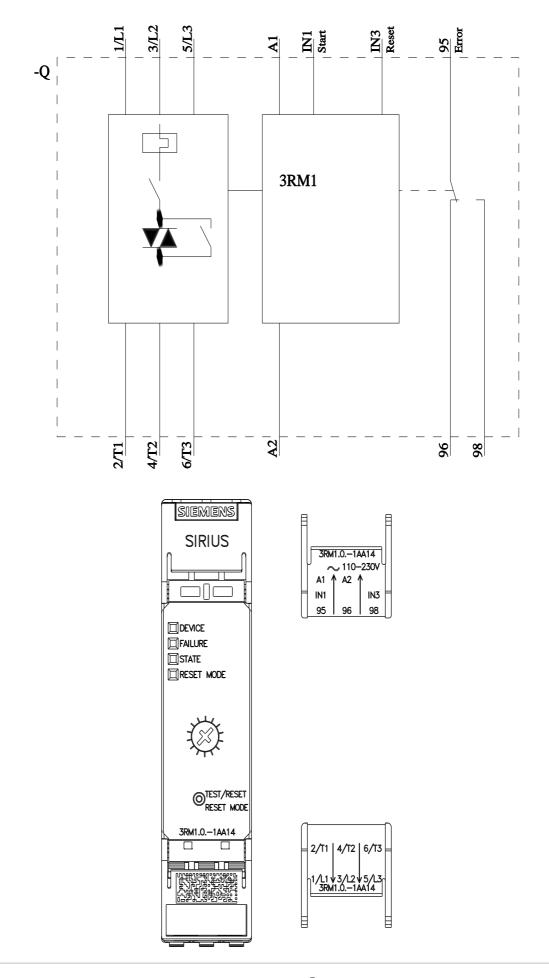
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https://support.industry.siemens.com/cs/ww/en/ps/3RM1002-1AA14

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM1002-1AA14&lang=en







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